

BEACON

Building Enterprise Access for NC's Core Operation Needs

Data Integration Initiative Semi Annual Report October 2008

State of North Carolina

Office of the State Controller

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I. Background

Today, most NC state agencies deliver services through a number of different business programs which are supported by multiple, disparate information technology systems. As a result, information is spread across many siloed systems which are often supported using old architecture with data that is complex, out-of-date, or stored in inconsistent formats that work well for independent programs, but are not easily accessible to a customer-centric, service-driven environment.

In an effort to improve customer service and delivery to the citizens of North Carolina, it is critical that information be shared across State programs. As such, state agencies require a business intelligence solution that will position all stakeholders with the ability to access a secured flow of information with a high degree of accuracy and consistency.

Session Law 2007-323, House Bill 1473 (Appendix A) directed the Office of the State Controller, in cooperation with the State Chief Information Officer, to develop a Strategic Implementation Plan for the integration of databases and the sharing of information among state agencies and programs. It further directed that the plan be developed under the governance of the BEACON Project Steering Committee, in conjunction with the leadership in the state agencies and with the support of the office of State Budget and Management.

The Strategic Plan for Statewide Data Integration was delivered, as directed, on April 30, 2008. This plan defined data integration as the capability of merging and reconciling dispersed data for analytical purposes through the use of standardized tools to support quick, agile, event-driven analysis for business. It recommended the establishment of an environment where agencies and programs partner to develop business solutions which are enabled by technology. The plan recognized that communication is the key to success. It suggested the State encourage the establishment of communities of interest and a business intelligence competency center to support enterprise solutions to business problems.

Session Law 2008-107, House Bill 2436, (Appendix B) supported data integration and expanded the BEACON Steering Committee to encompass a broader representation of the State's senior management team. It directed the implementation of the Strategic Plan for Data Integration and the development of the Business Intelligence Competency Center (BICC) to support agencies and programs need for information.

This report summarizes the BEACON data integration activities following the ratification of S.L. 2008-107, H.B. 2436.

II. BEACON Data Integration Program

BEACON, Building Enterprise Access for NC's Core Operation Needs, is a statewide collaborative effort to transform the business in North Carolina by modernizing and standardizing key business processes. The BEACON Data Integration Program's goal is to provide a statewide framework that promotes and supports the development of applications which transform data into information for business.

The Strategic Plan for Data Integration recognizes the current state of data warehousing, and data analytics. It identifies the long term goals and recommends a framework upon which the data integration initiative can grow and realize its objectives. The projects undertaken through this initiative will be limited by the need, quality and availability of statewide data. Data integration projects will not address the need for replacement and/or the consolidation of old or outdated disparate applications; rather they will focus on developing an approach to provide a secured flow of information to integrated data warehouse(s) where statistical, analytical and predictive modeling can occur.

II (A). Objectives

The objective of the BEACON Data Integration Initiative is to develop a framework and the business infrastructure needed to expand and promote the use of data, as an information asset, in support of strategic business operations. This framework is founded on the principle of collaboration. It relies on stakeholders coming together to identify business needs and data access points.

For North Carolina to recognize the value of data integration and the use of analytics, senior leadership will be called upon to champion a cultural shift which promotes data sharing. Business leaders will be encouraged to be stewards of the State's data assets rather than data owners.

II (B). Summary

Data Integration is a business issue where technology is the enabler. The BEACON Data Integration initiative developed a Strategic Plan in accordance with the directive set forth in S.L. 2007-323, H.B. 1473. Within this plan statewide data integration is defined as the capability of merging and reconciling dispersed data for analytical purposes through the use of standardized tools to support quick, agile, event-driven analysis for business.

The implementation of the Data Integration Strategic Plan is focused on the development of an environment that promotes the use of business intelligence to make better informed decisions. Its foundation is based upon the establishment of Communities of Interest and the implementation of a North Carolina Business Intelligence Competency Center (NCBICC).

The NCBICC is an organization that is based on industry best practice. Its role is to support and manage the business need for analytics by offering a infrastructure that assists with the design development and implementation of business intelligence applications. The Community of Interest's goal is to engage stakeholders with varying responsibilities to collaborate on enterprise issues in support of solution development. Their focus is to identify needs and assist in ensuring project success. (Appendix C)

II (C). Approach

The objective of the BEACON Data Integration Strategic Plan is to develop the framework that provides the State with the ability to expand and promote the use of the enterprise software which supports statewide data integration, sharing, reporting and advanced analytics.

1. Develop a Communities of Interest

The merging and transformation of disparate data into integrated information requires collaboration, tools, knowledge and expertise. To encourage collaboration, Communities of Interest will be established. This practice will unite business and technical users to conduct needs analysis across a focus area rather than within their silo. Those projects that demonstrate this type of strategic thinking and information sharing vision will be encouraged to work under the support of the BICC to develop and implement their project.

2. Develop a NC Business Intelligence Competency Center

The BEACON Data Integration initiative recommended the State reduce its reliance on external consulting and as such invest in developing a Business Intelligence Competency Center. The NCBICC is a permanent organization that will support data integration and the use of analytics.

The NC Office of the State Controller (OSC) and Information Technologies Services (ITS) are partnering to develop the NCBICC infrastructure. Together they plan to stage a "sandbox" infrastructure that provides the hardware, software, and technical resources needed to support agencies and programs with the transformation of disparate data into integrated information for business.

Initially the NCBICC will focus on developing resource competency within the SAS toolset which, with the 2007 enterprise agreement, became the enterprise analytical tool for the State's executive branch. The NCBICC will employ two permanent full time technical experts to serve as an internal consulting team that assists in the successful delivery of data integration projects and quick and agile responses to business questions through the use of analytics.

3. Develop a NC SAS User Group

Identify the current State users of the SAS toolset and garner support from the current user community to create a user forum for collaboration and the sharing of applications. This forum will establish a communication link that will offer existing users and new users an opportunity to improve their understanding and application of the SAS toolset.

II (C). Accomplishments

The initial State data integration effort has focused on the criminal justice pilot program and its business objectives. An outcome to date included the development of a community of interest and the initial planning of the NCBICC.

1. Communities of Interest

A community of Interest has been established in support of the Data Integration Criminal Justice Pilot Program. It consists of the Advisory Committee, the agency partners recognized within the 2008 session law, and a criminal justice working group. Together this team of individuals will identify the projects issues and recommend business solutions.

2. NCBICC

The NCBICC planning effort is underway. The SAS user community (agencies and programs) have been identified (Appendix D) and will be contacted to request their participation and development of the SAS user group.

The State CIO and Sate Controller have begun the planning effort associated with the establishment of the internal service organization. ITS has initiated a review of the technical infrastructure necessary to support the data integration activities.

II (C). Next Steps

1. Community of Interest

Communities of interest are expected to grow with the State's growing need for integrated information. The BEACON Data integration project team will be made available to assist agencies in developing a community of interest for their business area.

2. NCBICC

A business plan for the NCBICC will be developed with input from the current SAS user base, the Office of the State Controller and the State Information Technology Services. ITS will identify the costs associated with staging the NCBICC technology platform and associated support services. A cost recovery model will be developed to assist with supporting the operation in the long term.

NCBICC governance program will be established. The governance program will include the charter, mission, goals, roles and responsibilities and communication plan. Performance metrics will be developed to assess the NCBICC's value and areas for continuous improvement.

II (D). Funds – BEACON Data Integration Program

Balance as of: August 30, 2008

	<u>Appropriated</u>	<u>Expended</u>	<u>Available Balance</u>
FY 2007 - 2008			
Information Technology Funds FY 2007- 2008	\$ 5,000,000		
Data Integration Strategic Planning Project		\$ 176,370	
Statewide Enterprise Licensing Agreement		<u>2,500,000</u>	
Total	<u>\$ 5,000,000</u>	<u>\$ 2,676,370</u>	<u>\$ 2,323,630</u>
FY 2008 - 2009			
Information Technology Funds FY 2008- 2009	\$ 5,000,000		
Data Integration Strategic Planning Project		\$ 30,330	
Total	<u>\$ 10,000,000</u>	<u>\$ 2,706,700</u>	<u>\$ 7,293,300</u>

III. Summary

The long term vision of statewide data integration is to maximize the State's data assets for efficient and informed business decisions on which the outcomes can be monitored and acted upon. The critical success factors associated with this effort include; cultural transformation, data policy alignment, data governance and standards, resources availability, cross agency communication, and technology support. The data integration infrastructure; the community of interest and the NCBICC, are being developed to align these critical success factors.

A. SESSION LAW 2007-323, HOUSE BILL 1473

AN ACT TO MAKE BASE BUDGET APPROPRIATIONS FOR CURRENT OPERATIONS OF STATE DEPARTMENTS, INSTITUTIONS, AND AGENCIES, AND FOR OTHER PURPOSES.

BEACON DATA INTEGRATION

SECTION 6.8.(a) The Office of the State Controller, in cooperation with the State Chief Information Officer, shall develop a Strategic Implementation Plan for the integration of databases and the sharing of information among State agencies and programs. This plan shall be developed and implemented under the governance of the BEACON Project Steering Committee and in conjunction with leadership in State agencies and with the support and cooperation of the Office of State Budget and Management. This plan shall include the following:

- (1) Definition of requirements for achieving statewide data integration.
- (2) An implementation schedule to be reviewed and adjusted by the General Assembly annually based on funding availability.
- (3) Priorities for database integration, commencing with the integration of databases that the BEACON Project Steering Committee identifies as most beneficial in terms of maximizing fund availability and realizing early benefits.
- (4) Identification of current statewide and agency data integration efforts and a long-term strategy for integrating those projects into this effort.
- (5) Detailed cost information for development and implementation, as well as five years of operations and maintenance costs.

While it is the intent that this initiative provide broad access to information across State government, the plan shall comply with all necessary security measures and restrictions to ensure that access to any specific information held confidential under federal and State law shall be limited to appropriate and authorized persons.

SECTION 6.8.(b) The State Controller shall serve as Chairman of the BEACON Project Steering Committee (Committee). The other members of the Committee shall include the State Chief Information Officer, the State Personnel Director, the Deputy State Budget Director, and the Department of Transportation's Chief Financial Officer.

SECTION 6.8.(c) Of the funds appropriated from the General Fund to the North Carolina Information Technology Fund, the sum of five million dollars (\$5,000,000) for the 2007-2008 fiscal year shall be used for BEACON data integration as provided by subsection (a) of this section. The Office of the State Controller, in coordination with State agencies and with the support of the Office of State Budget and Management, shall identify and make all efforts to secure any federal matching funds or other resources to assist in funding this initiative.

Funds authorized in this section may be used for the following purposes:

- (1) To support the cost of a project manager to conduct the activities outlined herein reportable to the Office of the State Controller.
- (2) To support two business analysts to provide support to the program manager and agencies in identifying requirements under this program.
- (3) To engage a vendor to develop the Strategic Implementation Plan as required herein.

- (4) To conduct integration activities as approved by the BEACON Project Steering Committee. The State Chief Information Officer shall utilize current enterprise licensing to implement these integration activities.

SECTION 6.8.(d) The Office of the State Controller, with the assistance of the State Chief Information Officer, shall present the Strategic Implementation Plan outlined by this section to the 2007 Regular Session of the General Assembly when it convenes in 2008 for action as deemed appropriate. This plan shall be completed not later than April 30, 2008.

Prior to the reconvening of the 2007 Regular Session of the General Assembly in 2008, the Office of the State Controller shall provide semiannual reports to the Joint Legislative Oversight Committee for Information Technology. Written reports shall be submitted not later than October 1, 2007, and April 1, 2008, with presentations of the reports at the first session of the Joint Legislative Oversight Committee on Information Technology following the written report submission date. The Joint Legislative Oversight Committee on Information Technology shall then report to the Joint Legislative Commission on Governmental Operations.

SECTION 6.8.(e) Neither the development of the Strategic Information Plan nor the provisions of this section shall place any new or additional requirements upon The University of North Carolina or the North Carolina Community College System.

Ratified July 31, 2007

B. SESSION LAW 2008-107, HOUSE BILL 2436

AN ACT TO MODIFY THE CURRENT OPERATIONS AND CAPITAL APPROPRIATIONS ACT OF 2007, TO AUTHORIZE INDEBTEDNESS FOR CAPITAL PROJECTS, AND TO MAKE VARIOUS TAX LAW AND FEE CHANGES.

BEACON DATA INTEGRATION

SECTION 6.16.(a) The Office of the State Controller, in cooperation with the State Chief Information Officer, shall begin implementation of the Beacon Strategic Plan for Data Integration, issued in April 2008. This plan shall be implemented under the governance of the BEACON Project Steering Committee and in conjunction with leadership in appropriate State agencies and with the support and cooperation of the Office of State Budget and Management.

While it is the intent that this initiative provide broad access to information across State government, the plan shall comply with all necessary security measures and restrictions to ensure that access to any specific information held confidential under federal and State law shall be limited to appropriate and authorized persons.

SECTION 6.16.(b) The State Controller shall serve as the Chairman of the BEACON Project Steering Committee. The other members of the committee shall be the State Chief Information Officer, the State Treasurer, the Attorney General, the Secretary of Correction, the Administrative Officer of the Courts, the State Budget Officer, and the Chief Financial Officer of the Department of Transportation.

SECTION 6.16.(c) Of the funds appropriated from the General Fund to the North Carolina Information Technology Fund, the sum of five million dollars (\$5,000,000) for the 2008-2009 fiscal year shall be used for BEACON data integration as provided by subsection (a) of this section. Funds to support this activity shall also be the unexpended balance from the funds appropriated for BEACON/Data Integration Funds in Section 5.3(b) of S.L. 2007-323. The Office of the State Controller, with the support of the Office of State Budget and Management, shall identify and make all efforts to secure any matching funds or other resources to assist in funding this initiative.

SECTION 6.16.(d) Funds authorized in this section may be used for the following purposes:

- (1) To support the cost of a project manager to conduct the activities outlined herein reportable to the Office of the State Controller.
- (2) To support two business analysts to provide support to the program manager and agencies in identifying requirements under this program.
- (3) To establish a Business Intelligence Competency Center (BICC), a collaborative organization comprised of both technical and business stakeholders, to support and manage the business need for analytics through the development of standards and best practices.
- (4) To engage a vendor to implement the Strategic Implementation Plan as required herein.
- (5) To conduct integration activities as approved by the BEACON Project Steering Committee. The State Chief Information Officer shall use current enterprise licensing to implement these integration activities.

SECTION 6.16.(e) Prior to the convening of the 2009 General Assembly, the Office of the State Controller shall provide semiannual reports to the Joint Legislative Oversight Committee for Information Technology. Written reports shall be submitted not later than October

1, 2008, and April 1, 2009, with presentations of the reports at the first session of the Joint Legislative Oversight Committee on Information Technology following the written report submission date. The Joint Legislative Oversight Committee on Information Technology shall then report to the Joint Legislative Commission on Governmental Operations.

SECTION 6.16.(f) Neither the implementation of the Strategic Information Plan nor the provisions of this section shall place any new or additional requirements upon The University of North Carolina or the North Carolina Community College System.

Ratified July 16, 2008

SESSION LAW 2008-118, HOUSE BILL 2438

AN ACT TO MAKE TECHNICAL, CLARIFYING, AND OTHER MODIFICATIONS TO THE STATE BUDGET.

SECTION 2.3. Section 6.16(b) of S.L. 2008-107 reads as rewritten:

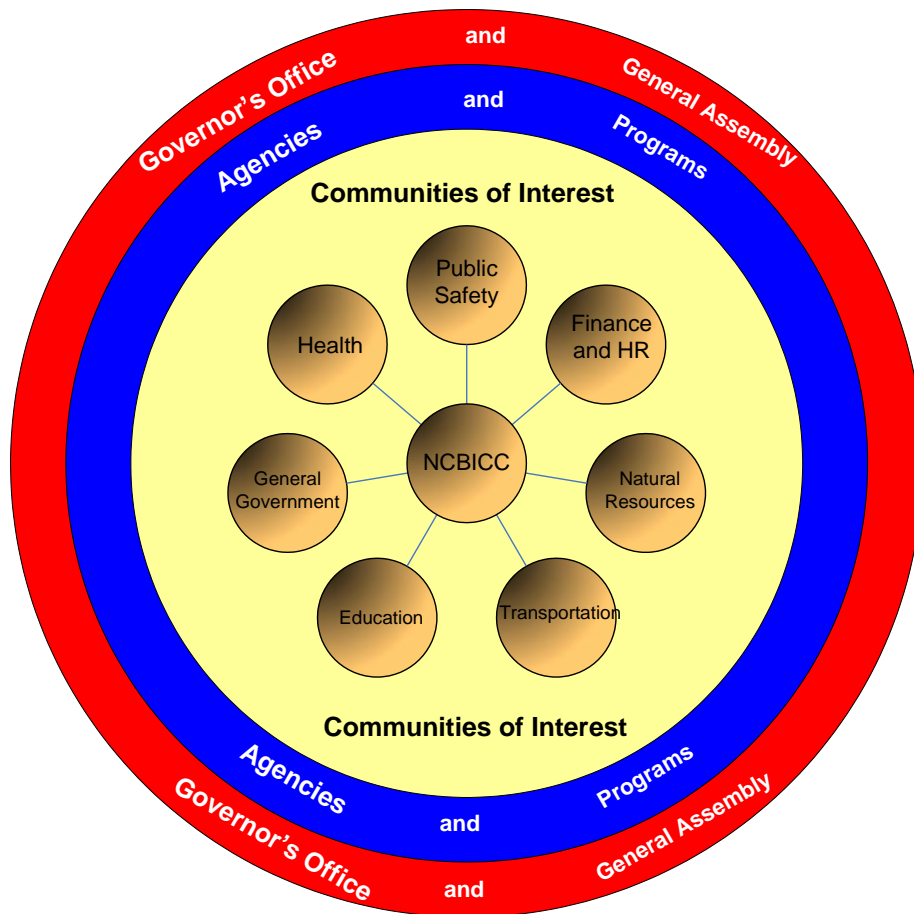
"SECTION 6.16.(b) The State Controller shall serve as the Chairman of the BEACON Project Steering Committee. The other members of the committee shall be the State Chief Information Officer, the State Treasurer, the Attorney General, the Secretary of Correction, the Administrative Officer of the Courts, the State Budget Officer, the Secretary of Administration, and the Chief Financial Officer of the Department of Transportation."

Ratified July 18, 2008

C. Data Integration Communities of Interest

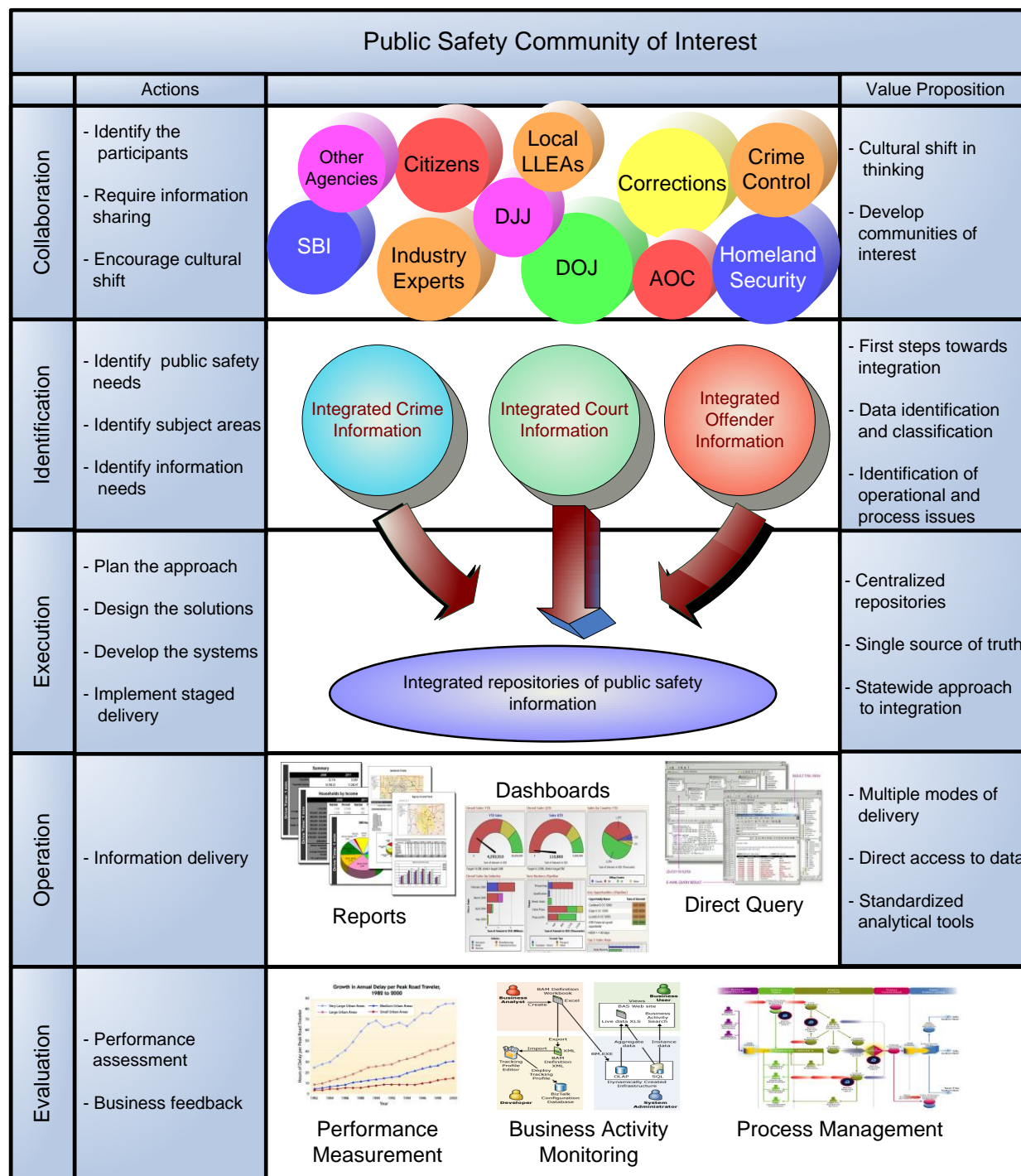
NCBICC Communications Hub

Open communication is the critical in developing sound analytical solutions. To encourage the necessary exchange of ideas, the NCBICC will encourage a communications hub that promotes collaborative teams around the common areas of interest (e.g. finance, budget, public safety, health, transportation, etc). These communities of interest will work together to ensure that the business solutions designed are appropriately scoped to solve a range of needs rather than a siloed business domain.



Community of Interest

The Community of Interest depicted below is an example of a forum that could be formed to discuss public safety. This graphic illustrates the solution development lifecycle that will be employed by communities of interest to support the integration of data and the use of data analytics.



D. Current SAS Users - State Agencies and Programs

State Agencies Currently Using SAS Tools through Enterprise Licensing
Dept of Agriculture
Dept of Commerce
Dept of Public Instruction
Dept of Health & Human Services (DHHS)
Dept. of Administration
Dept. of Crime Control & Public Safety
Dept. of the Secretary of State
Office of the State Auditor
Office of the State Controller
Dept. of Insurance
Office of State Budget Management
NC General Assembly
Dept. of the State Treasure
Dept. of Juvenile Justice & Delinquency Prevention
Dept of Revenue
Employment Security Commission
Dept. of Labor
Office of State Personnel
Dept of Justice
DENR
Dept of Correction
Dept of Transportation
Dept of Cultural Resources
NC State Health Plan